INDEX OF SURGICAL PROGRESS.

HEAD AND NECK.

I. Situation and Diseases of the Buccal Lymph-Nodes. By DR. HANS BUCHBINDER (Strassburg). In this article attention is called to this set of lymph-nodes, which seem to have been neglected by anatomists and surgeons alike, to judge at least by the lack of mention thereof in the text-books. From anatomical research, the author depicts four groups of buccal lymph-nodes,—one set situated over the inferior maxilla at the anterior border of the masseter, another group over the buccinator just back of the angle of the mouth, a third set at the point of perforation of Steno's duct, and a fourth group over the superior maxilla.

Instigated by the first clinical accounts of Poncet and Vigier, forty cases of inflammation of these buccal glands have been recorded, 50 per cent. of which were tuberculous.

The etiology of these affections is the same as that of glandular disease elsewhere. Of main concern is the diagnosis. A circumscribed swelling at any of the aforementioned sites should always arouse suspicion.

Furthermore, the author expresses his belief that a systematic search for these glands when the submaxillary group are involved and in infections of the lip and nose will reveal their presence in greater number.

Acute infections have to be differentiated from periostitis of the jaw, the tuberculous infections from scrofuloderma and dental fistula; secondary carcinomatous involvement of these glands are also on record. A record of the author's personal experience with each of these constitutes a large part of this article.—*Beiträge zur klinische Chirurgie*, Band xxv, Heft 1.

II. Subhyoid Pharyngotomy. By DR. B. HONSELL (Tübingen). At Bruns's Clinic the classical operation (Malgaigne) was performed four times,—for the removal of artificial teeth, for a sarcoma of the pharynx, for a carcinoma of the larynx, and for a lupus of the aditus laryngis. Three patients recovered; the one death, in the case of carcinoma, being due to an acute miliary tuberculosis. The author has summarized ninety-four cases from the literature, with an analysis of the technique, the mortality, and the indications for this operation.

Preliminary tracheotomy was practised in every one of Bruns's cases, with the aforesaid result; whereas the failure to do so caused among ninety-four cases collected from literature a mortality of 66 per cent., chiefly due to aspiration pneumonia. Feeding was accomplished by stomach tube left *in situ* for one to two weeks, since Krönlein had shown that in malignant cases a postponement to feed *per os* endangers the life of the patient proportionately to the delay.

The indications for this operation have been greatly narrowed down. It is now resorted to for the removal of foreign bodies impacted in the pharynx not removable by the mouth; exceptionally for the removal of benign laryngeal growths of large size. Subhyoid pharyngotomy is in place for the removal of malignant growths of the aditus laryngis, provided the lateral and posterior parts are not invaded by the disease, in which instance thyrotomy offers the better chance. In the strictest sense, the author sees subhyoid pharyngotomy limited to malignant tumors of the epiglottis. Again, in malignant tumors of the pharynx there is a wide field for subhyoid pharyngotomy, and only modifications thereof to meet the exigencies compete with it. A new vista for this operation was inaugurated by Garré, who successfully operated a case of lupus, followed by Brondergeest, who performed this operation three times for the same condition, with two cures. As a means of affording drainage in extensive resections of the jaw, it was suggested by Trendelenburg, but unsuccessfully applied by Albert.

The mortality for this operation in all conditions is 29 per cent., and 46 per cent. of these deaths were due to pneumonia, 11 per cent.

to wound infections, and the remainder to hæmorrhage, collapse, and marasmus.—*Beiträge zur klinische Chirurgie*, Band xxv, Heft 1.

MARTIN W. WARE (New York).

GENITO-URINARY ORGANS.

I. Implantation of the Ureter into the Bladder. By DR. ACHILLE BOARI (Pescia, Italy). This operation is indicated in the cure of uretero-vaginal and uretero-uterine fistulæ, and in the treatment of fistulæ of the lower end of the ureter in general, provided the ureter is sufficiently long to permit of its implantation into the bladder. Anomalous positions of the ureteral openings may be remedied by this operation, and the incontinence of urine thereby cured. It may be employed when operating for tumors of the bladder involving the ureteral orifice. Stenosis of the lower end of the ureter, congenital or acquired, may likewise be radically cured by resection of the constricted area and implantation of the proximal portion into the bladder. And, finally, a calculus encysted in the lower end of the ureter may furnish another indication for the performance of this operation.

The same button is employed as was used to establish a communication between the ureter and the intestine.—(*Vide Annales des Maladies des Organes Génito-Urinaires*, Janvier, 1896.)

The use of the button lessens technical difficulties. The button is small, and may be removed through the urethra,—that is to say, the female urethra,—because implantation is chiefly called for in operations on the pelvic organs of women which entail a risk of wounding the ureter. If employed in the male, extraction is only possible by performing cystotomy.

The method has recently been employed four times on women, with a favorable result in every case.

The technique of implantation of the ureter into the bladder is quite similar to that employed in making a communication by the aid of the Boari button between the ureter and the intestine.

The identity of the wounded ureter having been determined, an incision through the overlying peritoneum two or three centimetres long is made, and the ureter isolated for a suitable distance. A ligature is passed round the ureter above the site of the fistula, and the ureter is cut across on the proximal side of this ligature. The field of operation is suitably protected from contamination, and the possibility of approximating the ureter to the bladder is demonstrated. A button of a suitable calibre having been selected, the ureteral end is invaginated upon the tube and secured in place by a silk ligature. The movable plate is depressed till it comes in contact with the underlying plate, and is kept in place by passing a stylet through the opening situated in the tube. (Figs. 1, 2, and 3.)

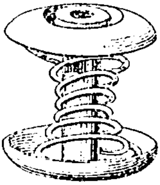

FIG. 1.—Boari's button. (Twice the actual size.)

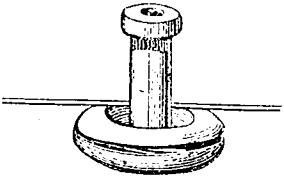

FIG. 2.—Boari's button. (Twice the actual size; spring held down by the stylet.)

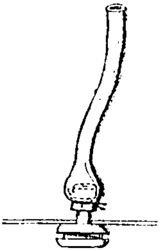

FIG. 3.—Ureter fixed upon the button. (One-half actual size.)

With a fine intestinal needle, a purse-string suture is inserted in the bladder at the site selected for reception of the ureter, and in the area so mapped out an incision of suitable length is made for the introduction of the large part of the button. The purse-string suture is drawn up and tied, bringing the suture line into close contact with the tube. The stylet is withdrawn, allowing the spring of the button to bring the vesical wall into contact with the ureter. It is best to reinforce this approximation by some sutures

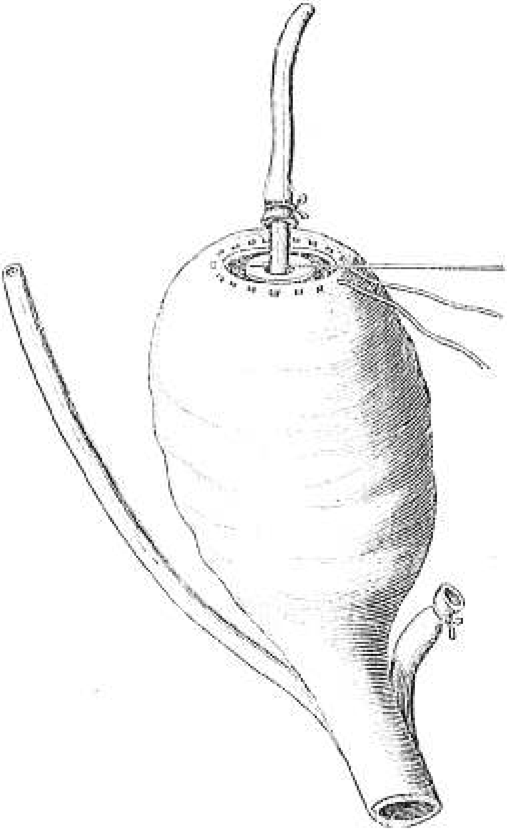

FIG. 4.—Technique of implantation of the ureter into the bladder by means of the Boari button.

passed through the peri-vesical and peri-ureteral tissues. Another and better plan consists in applying the original purse-string suture only to the vesical mucous membrane, and then attaching two flaps derived from the muscular coat over the ureter, giving a broader surface of contact, and also obtaining an oblique insertion in imitation of the natural anatomical arrangement. The anastomosis can also be made extraperitoneal, after Novaro's method, by stripping off the peritoneum from the pubes to the site of the implantation and packing with gauze.

The button is easily removed after dilating the urethra, and either catching it in forceps or seizing the thread attached to the base of the button.

The use of the button has markedly reduced technical difficulties of implantation of the ureter into the bladder. Experimental investigation has been confirmed by clinical successes. Its performance is speedy and easy. There is a real disadvantage in the necessary dilatation of the urethra for extraction of the button.

Implantation of the ureter is not followed by physiological disturbances of the urinary excretion, and is devoid of the dangers of infection and cicatricial contraction attending implantation into the rectum. While no hydronephrosis due to stenosis of the orifice has been observed, in Pozzi's case there was a certain amount of renal dilatation attributable to a reflux of urine into the ureter from overdistention of the bladder. This inconvenient feature is due to want of sphincteric action, and may be overcome by making the implantation oblique, or, still better, by establishing the new orifice at the summit of the bladder.

Renal infection was found to be totally absent, and, furthermore, the observations of Bazy and Rouffart showed that a previously purulent urinary secretion may become entirely normal after this operation.

Is implantation of the ureter always possible? In other words, what is the limit of the loss of substance compatible with the performance of this operation?

The ureter is extensible, and our knowledge of its vitality and vascular supply allows us to isolate it from its surroundings to an extent that adds several centimetres to its length. In addition, Kelly has shown that the bladder may be attracted towards the ureter by separating its attachments to the pubes. All these expedients sometimes fail of their purpose.—*Annales des Maladies des Organes Génito-Urinaires*, November, 1899.

CHARLES L. GIBSON (New York).

RECTUM AND ANUS.

I. Vagino-Rectal Operations. By DR. W. LIERMANN (Frankfort). Encouraged by the successful results of nine cases operated by Professor Rehn, the author pronounces the vaginal route as the best by which to operate extensively upon the rectum of females. Technique :—lithotomy position, tamponade of the rectum, division of the recto-vaginal septum, then extensive lateral incisions invading the ischio-rectal fossa in order to free the rectum, and at a point about one and a half inches above the anus the incisions completely surround the rectum. The bowel is never opened until the final stage unless the growth extends into the sigmoid, when it is divided, and the central segment is drawn upward in order to render visible and accessible the peritoneal folds. The sigmoid is subsequently drawn down, into the grasp of the sphincter, through the anus whose mucous membrane is freshened. To permit of this, the mesentery of the sigmoid must be sufficiently divided. The advantages claimed for this method are that there is no sacrifice of adjoining structures as in the sacral method, and the same indications that are prompting the gynæcologists to prefer vaginal laparotomy are at play here, viz.: the pathological changes have rendered the peritoneum relatively immune, the dependent situation of the wound favors drainage, and the larger size of the wound permits of quicker and more radical operating, since the uterus and vagina may be extirpated if involved. The operated cases comprised five carcinomata, one prolapse, and three non-malignant strictures.—*Beiträge zur klinische Chirurgie*, Band xxv, Heft 1. MARTIN W. WARE (New York).

BONES.

I. Acute Infectious Osteomyelitis of the Vertebræ.

By Dr. Otto Hahn (Tübingen). This is a study of forty-one cases of osteomyelitis of the vertebræ, inclusive of the author's three cases, and demonstrates the etiology to be the same as in affections of other bones. Thus the greater number of cases were encountered in the first two decades of life. The cervical vertebræ were the seat of disease seven times, the dorsal twelve times, the lumbar seventeen times, the sacrum five times. No direct cause could in any instance be cited for the osteomyelitis, which appears to be as spontaneous (?) as in the long bones. The focus of infection involved parts or the whole of one or more vertebræ. Contrary to the observation in osteomyelitis of long bones, the periosteum showed no tendency to proliferation. As might be expected, the chief complication was inflammation of the cord and its membranes, which was encountered twelve times. In twelve instances where bacterial examination was instituted the staphylococcus aureus was found.

The greatest interest centres in the diagnosis of this affection, since the local manifestations may be overshadowed by the complications of the adjoining viscera, whence the following diseases have to be differentiated: spinal meningitis, retropharyngeal abscess, Landry's paralysis, pneumonia, pleurisy, peritonitis, typhoid fever, typhoid spine.

Prognosis.—The location of this disease in the body of the vertebræ renders the prognosis somewhat grave because of the nearness of the spinal cord and other adjoining viscera. A still further estimate of the prognosis depends on what segment of the column is diseased; thus, a greater mortality follows affections of the lumbar spine, and not, as was heretofore taught, that the higher the lesion the worse the outlook.

Therapy.—Prompt operative interference incident to early recognition offers the best chances of recovery. Retropharyngeal abscesses are to be opened externally; psoas abscesses are to be approached anteriorly, as in the extraperitoneal ligation of the common iliac artery. Even if the osteomyelitis is deemed an expression of constitutional pyæmia, operation offers the only chance of recovery, provided the physical condition of the patient permits it.—*Beiträge zur klinische Chirurgie*, Band xxv, Heft 1.

MARTIN W. WARE (New York).

II. Treatment of Fracture of the Patella by Suturing the Capsule. By DR. M. VALLAS. The author draws attention to the fact that a good functional result is sometimes found when marked separation of the bony fragments persists after patella fracture, and that a bad functional result is sometimes observed when accurate bony union has been obtained. Experimentally, it can be shown that division of the patella alone does not admit of a separation of the fragments greater than a few millimetres even when the knee is fully flexed, but that division of the capsule on either side of the divided patella at once permits the occurrence of wide separation. Fractures of the patella without injury to the capsule should be treated like hæmarthrosis—by compression, massage, and early mobilization. The difficulty of recognizing absence of capsular injury is great. Slightness of the separation of the fragments is insufficient for diagnosis. In doubtful cases the author treats as for hæmarthrosis until, after the lapse of three or four days, swelling and pain have diminished and thorough examination is possible. Palpation may show capsular rupture. If the injury involves the patella alone, the patient by the fourth day ought to be able to voluntarily lift his leg above the plane of the bed. If he cannot do this, sufficient capsular injury is present to call for operation. Any case in which two centimetres of separation are demonstrated must be operated upon.

The Operation.—Make a median vertical incision from one centimetre above the superior fragment to one centimetre below the inferior fragment. Make a transverse incision at right angles to the above and make it follow the line of fracture. This transverse incision must be long enough to expose to view the whole of the capsular rent. Carefully clean the joint cavity, removing all blood-clots, etc. Clean and freshen (if necessary) the fractured surfaces of the patella, and pare away any shreds of periosteum which might get between the fragments when they are brought together.

The following layers of tissue are now in evidence:

(1) Skin and subcutaneous tissue.

(2) The deep fascia.

(3) The anterior ligament of the knee or articular capsule consisting of the patella in the middle line, with the peripatellar fibrous tissue on either side and lined by the synovialis.

(4) The condyles of the femur.

Suture is begun at the ends of the wound remote from the patella. The author uses metallic sutures. A suture is passed through the whole thickness of the lower lip of the wound from the skin into the joint, then from within outward through the synovialis and fibrous capsule of the upper lip of the wound. The upper end of the suture is passed in the reversed direction, *i.e.*, first from without inward through the fibrous capsule and synovialis of the upper lip of the wound, and then from within outward through all the layers of the lower lip of the wound. The free ends of the sutures are twisted over a pad of gauze. A sufficient number of these sutures are introduced to close the wound. Suture of the patella itself is unnecessary. The external wound is closed with silkworm-gut. A slightly compressing dressing is applied without drainage, and the whole covered with a plaster-of-Paris bandage. The first dressing is made after about eight days, the stitches are removed, and a splint or plaster dressing is applied. One week later splints are removed. Massage is applied to the thigh muscles, and the patient encouraged to voluntarily contract the quadriceps without lifting his leg from the plane of the bed.

About eighteen or twenty days after the operation massage of the knee is practised and passive movements are begun. Active movement of the knee and convalescence soon follow.—*Revue de Chirurgie*, October, 1899.

J. F. BINNIE (Kansas City).